

# Actuarial Section



**GABRIEL, ROEDER, SMITH & COMPANY**  
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October 17, 2005

Board of Trustees  
North Dakota Teachers' Fund for Retirement  
1930 Burnt Boat Drive  
P. O. Box 7100  
Bismarck, ND 58507-7100

**Subject: Actuarial Valuation as of July 1, 2005**

We certify that the information contained in this report is accurate and fairly presents the actuarial position of the North Dakota Teachers' Fund for Retirement (TFFR) as of July 1, 2005.

All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion the results presented also comply with the North Dakota Century Code, and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. The undersigned are independent actuaries. All three are Enrolled Actuaries and Members of the American Academy of Actuaries and both are experienced in performing valuations for large public retirement systems. All three meet the Qualification Standards of the American Academy of Actuaries.

***Actuarial Valuation***

The primary purposes of the valuation report are to determine the adequacy of the current employer contribution rate, to describe the current financial condition of TFFR, and to analyze changes in TFFR's condition. In addition, the report provides information required by TFFR in connection with Governmental Accounting Standards Board Statement No. 25 (GASB No. 25), and it provides various summaries of the data. Valuations are prepared annually, as of July 1 of each year, the first day of TFFR's plan and fiscal year.

***Financing Objectives***

The member and employer contribution rates are established by statute, and both are currently set at 7.75%. The rates are intended to be sufficient to pay TFFR's normal cost and to amortize TFFR's unfunded actuarial accrued liability (UAAL) in level payments over a period of 30 years from the valuation date. The amortization period used in the previous valuation was 20 years, but it was increased by the Board effective for this valuation. A thirty-year period is the maximum amortization period allowed by GASB 25 in computing the Annual Required Contribution (ARC). The thirty-year period is in common use for public-sector plans and is considered reasonable by the actuary.

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### ***Progress Toward Realization of Financing Objectives***

In order to determine the adequacy of the 7.75% statutory employer contribution rate, it is compared to the GASB 25 ARC. The ARC is equal to the sum of (a) the employer normal cost rate, and (b) the level percentage of pay required to amortize the UAAL over a 30 year period. For this calculation, payroll is assumed to increase 2.00% per annum. As of July 1, 2005, the ARC is 12.12%. This is greater than the 7.75% rate currently required by law. The shortfall (the negative margin) between the rate mandated by law and the rate necessary to fund the UAAL in 30 years is -4.37%.

The GASB ARC increased from 11.34% last year. The increase was due principally to two factors:

- the recognition of another 20% of the actuarial investment losses from FY 2001, FY 2002 and FY 2003 (offset by 20% of the actuarial investment gains from FY 2004 and FY 2005)
- the changes made to the actuarial assumptions, discussed below, offset by the effect of the changes in the amortization procedures

The increase in the ARC would have been even larger if not for the 13.3% market asset return in FY 2005.

If the 7.75% contribution rate remains unchanged, and all actuarial assumptions are exactly realized, including an 8.00% investment return on the actuarial value of assets, then the UAAL will never be amortized. I.e., TFFR has an infinite funding period.

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) decreased from last year. The funded ratio at July 1, 2004 was 80.3%, while it is 74.8% as of July 1, 2005. This decrease is due to the two factors cited above. Based on market values rather than actuarial values of assets, the funded ratio improved to 77.9% from 76.4% last year.

### ***Reporting Consequences***

TFFR is required to report in its Comprehensive Annual Financial Report (CAFR) for the current fiscal year ending June 30, 2005 that actual contributions received in FY 2005 were less than the ARC. The 7.75% statutory rate was 68.3% of the 11.34% ARC determined by the last valuation. Next year, the CAFR for FY 2006 will show that the 7.75% statutory rate was only 63.9% of the 12.12% ARC for FY 2006. There are no other accounting consequences for the state or the other school districts that sponsor TFFR, since it is a cost-sharing, multiple-employer retirement system.

### ***Benefit Provisions***

The actuarial valuation reflects the benefit and contribution provisions set forth in the North Dakota Century Code. The legislature made no material changes to these provisions since the last actuarial valuation.

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***Assumptions and Methods***

Actuarial assumptions and methods are set by the Board of Trustees, based upon recommendations made by the plan's actuary. On March 10, 2005, the Board adopted new assumptions and new amortization procedures, effective for this valuation. These new assumptions and procedures were recommended by the actuary, following an analysis of plan experience for the five-year period ending June 30, 2004. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of TFFR. These actuarial assumptions and methods comply with the parameters for disclosure in GASB 25.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods.

***Data***

Member data for retired, active, and inactive participants was supplied as of July 1, 2005, by the staff of the Retirement and Investment Office (RIO). We have not subjected this data to any auditing procedures, but have examined the data for reasonableness and consistency with the prior year's data. Asset information was also supplied by the RIO staff.

We prepared the Schedule of Funding Progress and the Schedule of Employer Contributions found in the Financial Section, while RIO staff prepared all of the other schedules and exhibits in this section. These other schedules and exhibits were generally based on information supplied in this and prior actuarial valuation reports. Our firm has prepared the annual actuarial valuations each year, beginning with the one prepared as of July 1, 1991. The previous actuary for TFFR prepared information related to prior valuations.

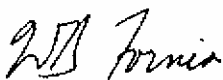
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**SUMMARY OF ACTUARIAL VALUATION RESULTS**

Item	2005	2004
Membership		
• Number of		
- Active Members	9,801	9,826
- Retirees and Beneficiaries	5,586	5,373
- Inactive, Vested	1,377	1,346
- Inactive, Nonvested	168	175
- Total	16,932	16,720
• Payroll	\$386.6 million	\$376.5 million
Statutory contribution rate		
• Employer	7.75%	7.75%
• Member	7.75%	7.75%
Assets		
• Market value	\$1,530.2 million	\$1,374.7 million
• Actuarial value	1,469.7 million	1,445.6 million
• Return on market value	13.3 %	18.9 %
• Return on actuarial value	3.3 %	1.9 %
• Ratio - actuarial value to market value	96.0 %	105.2 %
• External cash flow %	(1.6)%	(1.5)%
Actuarial Information		
• Normal cost %	11.31%	10.29%
• Unfunded actuarial accrued liability (UAAL)	\$495.5 million	\$354.8 million
• Funded ratio	74.8%	80.3%
• Funding period	Infinite	Infinite
GASB 25 ARC		
• Amortization period	30 years	20 years
• Amortization method	Level % (2.00%)	Level dollar
• Calculated contribution rate	12.12%	11.34%
• Margin	(4.37)%	(3.59)%
Gains/(Losses)		
• Asset experience	\$(67.4) million	\$(87.8) million
• Liability experience	(5.8) million	(19.7) million
• Benefit changes	0.0 million	0.0 million
• Assumption/method changes	(63.3) million	N/A
• Total	<u>\$(136.5) million</u>	<u>\$(107.5) million</u>

## SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

### ASSET VALUATION METHOD

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (or less than) expected investment income. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The actual investment return for this purpose is determined net of all investment and administrative expenses.

### ACTUARIAL COST METHOD

The GASB Annual Required Contribution (ARC) is determined using the Entry Age Normal actuarial cost method. This method assigns the plan's total actuarial present value of future benefits to various periods. The actuarial accrued liability is assigned to years prior to the valuation, and the normal cost is assigned to the year following the valuation. The remaining costs are assigned to future years.

The normal cost rate is determined as a level percentage of payroll for a hypothetical group of new entrants, based on the characteristics (age at hire, sex, pay at hire) of actual new members joining TFFR during FY 2000 through FY 2004. The actuarial accrued liability is the difference between the total present value of future benefits and the actuarial present value of future normal costs. The unfunded actuarial accrued liability (UAAL) is the excess of the actuarial accrued liability over the actuarial value of assets.

### AMORTIZATION PERIOD AND METHOD

The GASB Annual Required Contribution (ARC) is determined as the sum of (a) the employer normal cost rate, and (b) a level percentage of payroll required to amortize the unfunded actuarial accrued liability over 30 years. If the calculated ARC is less than the 7.75% statutory employer contribution rate, the 7.75% rate will be treated as the ARC. The 30-year period is an open period, and does not decrease in subsequent valuations.

### ACTUARIAL ASSUMPTIONS

1. Investment Return Rate 8.00% per annum, compounded annually, composed of an assumed 3.00% inflation rate and a 5.00% real rate of return. (Adopted July 1, 1990; allocation between inflation and real rate of return modified July 1, 2000.)

2. Mortality Rates

Deaths per 100 Lives

	<u>Age</u>	<u>Male Participants</u>		<u>Female Participants</u>	
		<u>Non-Disabled</u>	<u>Disabled</u>	<u>Non-Disabled</u>	<u>Disabled</u>
a. Post Retirement Non-Disabled—1994 Uninsured Pensioner Mortality Table set back three years for males and two years for females. (Adopted July 1, 2005.)	20	.0463	4.83	.0293	2.63
	25	.0598	4.83	.0313	2.63
	30	.0782	3.62	.0338	2.37
	35	.0902	2.78	.0454	2.14
b. Post Retirement Disabled—Pension Benefit Guaranty Corporation Disabled Life Mortality Tables Va and VIa. (Adopted July 1, 1990.)	40	.0958	2.82	.0643	2.09
	45	.1346	3.22	.0943	2.24
	50	.2042	3.83	.1297	2.57
	55	.3455	4.82	.2051	2.95
	60	.6001	6.03	.3612	3.31
	65	1.0911	6.78	.7179	3.70
c. Active Mortality—65% of non-disabled post-retirement mortality rates.	70	1.9391	7.39	1.2648	4.11

**Summary of Actuarial Methods and Assumptions (continued)****3. Retirement Rates**

The following rates of retirement are assumed for members eligible to retire. (Adopted July 1, 2005.)

<u>Retirements per 100 Members</u>				
<u>Age</u>	<u>Unreduced Retirement Ultimate Rate*</u>		<u>Reduced Retirement</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
50	20.0%	25.0%	0.0%	0.0%
51	20.0%	25.0%	0.0%	0.0%
52	20.0%	25.0%	0.0%	0.0%
53	20.0%	25.0%	0.0%	0.0%
54	20.0%	25.0%	0.0%	0.0%
55	20.0%	25.0%	2.0%	1.5%
56	20.0%	25.0%	2.0%	1.5%
57	20.0%	25.0%	2.0%	1.5%
58	20.0%	25.0%	2.0%	1.5%
59	20.0%	20.0%	2.0%	1.5%
60	25.0%	25.0%	5.0%	2.0%
61	30.0%	30.0%	5.0%	2.0%
62	30.0%	50.0%	20.0%	10.0%
63	25.0%	25.0%	5.0%	5.0%
64	20.0%	50.0%	25.0%	20.0%
65	65.0%	50.0%	--	--
66	35.0%	30.0%	--	--
67	35.0%	30.0%	--	--
68	35.0%	30.0%	--	--
69	35.0%	30.0%	--	--
70	100.0%	100.0%	--	--

\* If a member reaches eligibility for unreduced retirement under the rule of 85 before age 65, a retirement rate of 50.0% (for males) or 65.0% (for females) is used for that age only.

**4. Disability Rates**

As shown below for selected ages. (Adopted July 1, 2000.)

<u>Age</u>	<u>Disabilities Per 100 Members</u>
20	0.016
25	0.016
30	0.016
35	0.016
40	0.048
45	0.080
50	0.128
55	0.224
60	0.432
65	0.000

**Summary of Actuarial Methods and Assumptions (continued)**

5. Termination Rates      80% of the following withdrawal rates are used based on age and service, for causes other than death, disability, or retirement.  
(Adopted July 1, 2005.)

Males											
Age	Years of Service										
	0	1	2	3	4	5	6	7	8	9	10+
25	0.1420	0.1379	0.1366	0.1339	0.1220	0.1067	0.0896	0.0878	0.0860	0.0842	0.0598
30	0.1416	0.1376	0.1363	0.1336	0.1210	0.1053	0.0907	0.0889	0.0871	0.0853	0.0470
35	0.1359	0.1321	0.1308	0.1282	0.1141	0.0988	0.0867	0.0849	0.0832	0.0815	0.0343
40	0.1317	0.1280	0.1267	0.1243	0.1074	0.0928	0.0824	0.0808	0.0791	0.0775	0.0252
45	0.1282	0.1246	0.1234	0.1210	0.1002	0.0868	0.0777	0.0761	0.0746	0.0730	0.0196
50	0.1246	0.1211	0.1199	0.1176	0.0916	0.0809	0.0725	0.0710	0.0696	0.0681	0.0188
55	0.1444	0.1403	0.1390	0.1362	0.0974	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
60	0.1588	0.1544	0.1529	0.1499	0.1071	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
65	0.1747	0.1698	0.1681	0.1648	0.1178	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Females											
Age	Years of Service										
	0	1	2	3	4	5	6	7	8	9	10+
25	0.1654	0.1607	0.1592	0.1560	0.1307	0.1119	0.0952	0.0806	0.0790	0.0774	0.0352
30	0.1373	0.1334	0.1321	0.1295	0.1107	0.0964	0.0836	0.0738	0.0723	0.0708	0.0312
35	0.1143	0.1110	0.1100	0.1078	0.0926	0.0820	0.0732	0.0672	0.0658	0.0645	0.0275
40	0.0978	0.0951	0.0941	0.0923	0.0779	0.0695	0.0637	0.0607	0.0595	0.0583	0.0242
45	0.0910	0.0885	0.0876	0.0859	0.0686	0.0593	0.0553	0.0545	0.0535	0.0524	0.0220
50	0.0967	0.0940	0.0931	0.0912	0.0670	0.0519	0.0480	0.0484	0.0475	0.0465	0.0227
55	0.1455	0.1414	0.1400	0.1373	0.0742	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
60	0.1885	0.1831	0.1814	0.1778	0.0907	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
65	0.2498	0.2428	0.2404	0.2357	0.1167	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000



**Summary of Actuarial Methods and Assumptions (continued)**

6. Salary Increase Rates Inflation rate of 3.00% plus productivity rate of 1.50%, plus step-rate/promotional increase as shown below. (Adopted July 1, 2005.)

<u>Years of Service</u>	<u>Annual Step-Rate/ Promotional Component</u>	<u>Annual Total Salary Increase</u>
0	9.50%	14.00%
1	3.50%	8.00%
2	3.25%	7.75%
3	3.00%	7.50%
4	2.75%	7.25%
5	2.50%	7.00%
6	2.25%	6.75%
7	2.00%	6.50%
8	1.75%	6.25%
9	1.50%	6.00%
10	1.25%	5.75%
11	1.00%	5.50%
12	1.00%	5.50%
13	1.00%	5.50%
14	0.75%	5.25%
15 or more	0.00%	4.50%

7. Payroll Growth Rate 2.00% per annum. This assumption does not include any allowance for future increase in the number of members. (Adopted July 1, 2005.)
8. Percent Married For valuation purposes, 75% of members are assumed to be married. Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses. (Adopted July 1, 1992.)
9. Percent Electing a Deferred Termination Benefit Terminating members are assumed to elect the most valuable benefit at the time of termination. Termination benefits are assumed to commence at the first age at which unreduced benefits are available. (Adopted July 1, 1990.)
10. Provision for Expense The assumed investment return rate represents the anticipated net rate of return after payment of all administrative expenses and investment expenses. (Adopted July 1, 1992.)

**SCHEDULE OF ACTIVE MEMBERS**

Year Ending June 30	Active Members		Covered Payroll		Average Salary		Average Age	Average Service
	Number	Percent Increase	Amount in \$ Millions	Percent Increase	\$ Amount	Percent Increase		
1996	9,797	1.4	281.2	4.7	28,708	3.3	42.9	13.6
1997	10,010	2.2	294.1	4.6	29,382	2.3	43.4	14.0
1998	9,896	(1.1)	298.4	1.5	30,156	2.6	43.5	14.0
1999	10,046	1.5	314.6	5.4	31,318	3.9	44.0	14.4
2000	10,025	(0.2)	323.0	2.7	32,223	2.9	43.9	14.1
2001	10,239	2.1	342.2	5.9	33,421	3.7	44.4	14.4
2002	9,931	(3.0)	348.1	1.7	35,052	4.9	44.5	14.4
2003	9,916	(0.2)	367.9	5.7	37,105	5.9	44.8	14.6
2004	9,826	(0.9)	376.5	2.3	38,321	3.3	44.9	14.7
2005	9,801	(0.3)	386.6	2.7	39,447	2.9	44.9	14.7

**SCHEDULE OF RETIREES AND BENEFICIARIES**

Year Ended June 30	Number Added During Year	Annual Benefits Added (in mils)	Number Removed During Year	Annual Benefits Removed (in mils)	Number Receiving End of Year	Average Annual Benefit	Annual Pension Benefits (in mils)	Percent Increase In Annual Benefits
1996	238		168		4,503	\$8,628	\$38.5	6.9%
1997	138		179		4,462	8,748	39.5	2.6
1998	321		198		4,585	9,720	43.7	10.6
1999	170		187		4,568	9,996	46.1	5.5
2000	425		166		4,827	11,640	53.6	16.3
2001	162		212		4,777	11,940	57.7	7.6
2002	505		228		5,054	13,824	67.5	17.0
2003	312		189		5,177	14,436	72.0	6.7
2004	385	\$ 8.3	189	\$ 1.9	5,373	15,060	77.2	7.2
2005	385	8.9	172	1.8	5,586	15,708	84.5	9.5

Detail on annual benefits added and removed is not available prior to Fiscal Year 2004.

**ACTIVE MEMBERS VS RETIRED MEMBERS  
10-YEAR SUMMARY**

**ANALYSIS OF CHANGE IN GASB ANNUAL  
REQUIRED CONTRIBUTION (ARC)**

	<u>2005</u>	<u>2004</u>
Prior valuation	11.34 %	8.94 %
Increases/(decreases) due to:		
Open amortization	(0.19)%	(0.14)%
Growth in covered payroll	(0.23)%	(0.15)%
Employer contributions received at 7.75%; rather than 11.34% or 8.94%	0.29 %	0.02 %
Liability experience	0.14 %	0.49 %
Investment experience	1.63 %	2.18 %
Assumption changes	2.49 %	0.00 %
Change in amortization method	(3.35)%	0.00 %
Legislative changes	<u>0.00 %</u>	<u>0.00 %</u>
Total	0.78 %	2.40 %
Current valuation	12.12 %	11.34 %
Statutory employer contribution rate	7.75 %	7.75 %
Margin available	(4.37)%	(3.59)%

**ANALYSIS OF CHANGE IN UNFUNDED  
ACTUARIAL ACCRUED LIABILITY (UAAL)**

	<u>Unfunded Actuarial Accrued Liability (\$ in millions)</u>	
	<u>2005</u>	<u>2004</u>
Prior valuation	\$ 354.8	\$ 251.9
Increases/(decreases) due to:		
Amortization payments	\$ 4.2	\$ (4.6)
Investment experience	67.4	87.8
Assumption changes	63.3	-
Liability experience	5.8	19.7
Change in actuarial methods	-	-
Legislative changes	<u>-</u>	<u>-</u>
Total	\$ 140.7	\$ 102.9
Current valuation	\$ 495.5	\$ 354.8

**SOLVENCY TEST**

Valuation as of July 1	<u>Actuarial Accrued Liability (AAL) (in millions)</u>			Actuarial Value of Assets (\$ in millions)	<u>Portion of AAL Covered by Valuation Assets</u>		
	Active Member Contributions	Retirees and Beneficiaries	Active/Inactive Members (Employer Financed)		Active Member Contributions	Retirees and Beneficiaries	Active/Inactive Members (Employer Financed)
1996	\$280.0	\$332.6	\$239.0	\$733.3	100.0%	100.0%	50.5%
1997	310.0	344.9	322.2	823.4	100.0	100.0	52.3
1998	324.7	387.2	321.1	928.0	100.0	100.0	67.3
1999	361.0	426.5	400.8	1,053.1	100.0	100.0	66.3
2000	372.3	504.2	411.3	1,308.5	100.0	100.0	100.0
2001	413.9	551.6	502.2	1,414.7	100.0	100.0	89.4
2002	421.5	643.9	510.3	1,443.5	100.0	100.0	74.1
2003	451.4	689.4	549.5	1,438.4	100.0	100.0	54.2
2004	475.3	755.2	569.9	1,445.6	100.0	100.0	37.8
2005	498.2	820.8	646.2	1,469.7	100.0	100.0	23.3

## SUMMARY OF BENEFIT PROVISIONS

1. Effective Date: July 1, 1971.
2. Plan Year: Twelve-month period ending June 30th.
3. Administration: The Teachers' Fund for Retirement (TFFR) is administered by a Board of Trustees. A separate State Investment Board is responsible for the investment of the trust assets, although the TFFR Board establishes the asset allocation policy. The Retirement and Investment Office is the administrative agency for TFFR.
4. Type of Plan: TFFR is a qualified governmental defined benefit retirement plan. For Governmental Accounting Standards Board purposes, it is a cost-sharing multiple employer Public Employee Retirement System.
5. Eligibility: All certified teachers of any public school in North Dakota participate in TFFR. This includes teachers, supervisors, principals, administrators, etc. Non-certified employees such as teacher's aides, janitors, secretaries, drivers, etc. are not allowed to participate in TFFR. Eligible employees become members at their date of employment.
6. Employee Assessments: All active members contribute 7.75% of their salary per year. The employer may "pick up" the member's assessments under the provisions of Internal Revenue Code Section 414(h).
7. Salary: The member's total earnings are used for salary purposes, including overtime, etc., and including nontaxable wages under a Section 125 plan, but excluding certain extraordinary compensation, such as fringe benefits or unused sick and vacation leave.
8. Employer Contributions: The district or other employer which employs a member contributes 7.75% of the member's salary.
9. Service: Employees receive credit for service while a member. A member may also purchase credit for certain periods, such as time spent teaching at a public school in another state, by paying the actuarially determined cost of the additional service. Special rules and limits govern the purchase of additional service.
10. Final Average Compensation (FAC): The average of the member's highest three plan year salaries. Monthly benefits are based on one-twelfth of this amount.
11. Normal Retirement
  - a. Eligibility: A member may retire upon Normal Retirement on or after age 65 with credit for 3 years of service, or if earlier, when the sum of the member's age and service is at least 85.
  - b. Monthly Benefit: 2.00% of FAC (monthly) times years of service.
  - c. Payment Form: Benefits are paid as a monthly life annuity, with a guarantee that if the payments made do not exceed the member's assessments plus interest, determined as of the date of retirement, the balance will be paid in a lump-sum to the member's beneficiary. Optional forms of payment are available; see below.

## ***Summary of Benefit Provisions (continued)***

### **12. Early Retirement**

- a. Eligibility: A member may retire early after reaching age 55 with credit for three years of service.
- b. Monthly Benefit: 2.00% of FAC (monthly) times years of service, multiplied by a factor which reduces the benefit 6% for each year from the earlier of (i) age 65, or (ii) the age at which current service plus age equals 85.
- c. Payment Form: Same as for Normal Retirement above.

### **13. Disability Retirement**

- a. Eligibility: A member is eligible provided he/she has credit for at least one year of service.
- b. Monthly Benefit: 2.00% of FAC (monthly) times years of service with a minimum 20 years of service.
- c. Payment Form: The disability benefit commences immediately upon the member's retirement. Benefits cease upon recovery or reemployment. Disability benefits are payable as a monthly life annuity with a guarantee that, at the member's death, the sum of the member's assessments plus interest as of the date of retirement that is in excess of the sum of payments already received will be paid in a lump-sum to the member's beneficiary. All alternative forms of payment are also permitted in the case of disability retirement. Disability benefits are converted to normal retirement benefits when the member reaches normal retirement age or age 65, whichever is earlier.

### **14. Deferred Termination Benefit**

- a. Eligibility: A member with at least three years of service who does not withdraw his/her contributions from the fund is eligible for a deferred termination benefit.
- b. Monthly Benefit: 2.00% of FAC (monthly) times years of service. Both FAC and service are determined at the time the member leaves active employment. Benefits may commence unreduced at age 65 or when the rule of 85 is met (age plus service equals 85). Reduced benefits may commence at or after age 55 if the member is not eligible for an unreduced benefit.
- c. Payment Form: The form of payment is the same as for Normal Retirement above.
- d. Death Benefit: A member who dies after leaving active service but before retiring is entitled to receive a benefit as described below in 16b.

### **15. Withdrawal (Refund) Benefit**

- a. Eligibility: All members leaving covered employment with less than three years of service are eligible. Optionally, vested members (those with three or more years of service) may withdraw their assessments plus interest in lieu of the deferred benefits otherwise due.
- b. Benefit: The member who withdraws receives a lump-sum payment of his/her employee assessments, plus the interest credited on these contributions. Interest is credited at 6%.

## ***Summary of Benefit Provisions (continued)***

### **16. Death Benefit**

- a. Eligibility: Death must have occurred while an active or an inactive, non-retired member.
- b. Benefit: Upon the death of a nonvested member, a refund of the member's assessments and interest is paid. Upon the death of a vested member, the beneficiary may elect (i) the refund benefit above, (ii) payment for 60 months of the normal retirement benefit, based on FAC and service determined at the date of death, or (iii) a life annuity of the normal retirement benefit, determined under Option One below, based on FAC and service as of the date of death, but without applying any reduction for the member's age at death. Members not eligible for normal retirement benefits under Option One use the Fund's disability reduction tables.

### **17. Optional Forms of Payment:** There are optional forms of payment available on an actuarially equivalent basis, as follows:

- a. Option 1 - A life annuity payable while either the participant or his beneficiary is alive, "popping-up" to the original life annuity if the beneficiary predeceases the member.
- b. Option 2 - A life annuity payable to the member while both the member and beneficiary are alive, reducing to 50% of this amount if the member predeceases the beneficiary, and "popping-up" to the original life annuity if the beneficiary predeceases the member.
- c. Option 3a - A life annuity payable to the member, with a guarantee that, should the member die prior to receiving 60 payments (five years), the payments will be continued to a beneficiary for the balance of the five-year period. (This option has been replaced by Option 3b. It is not available to employees who retire on or after August 1, 2003. Retirees who elected this option prior to that date are unaffected.)
- d. Option 3b - A life annuity payable to the member, with a guarantee that, should the member die prior to receiving 240 payments (twenty years), the payments will be continued to a beneficiary for the balance of the twenty-year period. (This option replaced Option 3a effective August 1, 2003.)
- e. Option 4 - A life annuity payable to the member, with a guarantee that, should the member die prior to receiving 120 payments (ten years), the payments will be continued to a beneficiary for the balance of the ten-year period.
- f. Option 5 - A nonlevel annuity payable to the member, designed to provide a level total income when combined with the member's Social Security benefit.

In addition, members may elect a partial lump-sum option (PLSO) at retirement. Under this option, a member receives an immediate lump-sum equal to 12 times the monthly life annuity benefit and a reduced annuity. The reduction is determined actuarially. The member can then elect to receive the annuity benefit in one of the other optional forms, except that members who receive a PLSO may not elect Option 5 – the level income option. The PLSO is not available to disabled retirees or retirees who are not eligible for an unreduced retirement benefit.

Actuarial equivalence is based on tables adopted by the Board of Trustees.

### **18. Cost-of-living Increase:** From time to time, TFFR has been amended to grant certain post-retirement benefit increases. However, TFFR has no automatic cost-of-living increase features.

## SUMMARY OF PLAN CHANGES

### **1991 Legislative Session:**

1. Benefit multiplier increased from 1.275% to 1.39% for all future retirees.
2. Provide a post-retirement benefit increase for all annuitants receiving a monthly benefit on June 30, 1991. The monthly increase is the greater of a 10% increase or a level increase based on years of service and retirement date:
  - a. \$3 per year of service for retirements before 1980.
  - b. \$2 per year of service for retirements between 1980 and 1983.
  - c. \$1 per year of service for retirements from 1984 through June 30, 1991.

Minimum increase is \$5 per month. Maximum increase is \$75 per month.

### **1993 Legislative Session:**

1. Benefit multiplier increased from 1.39% to 1.55% for all future retirees.
2. Provide a post-retirement benefit increase for all annuitants receiving a monthly benefit on June 30, 1993. The monthly increase is the greater of a 10% increase or a level increase based on years of service and retirement date:
  - a. \$3 per year of service for retirements before 1980.
  - b. \$2.50 per year of service for retirements between 1980 and 1983.
  - c. \$1 per year of service for retirements from 1984 through June 30, 1993.

Minimum increase is \$5 per month. Maximum increase is \$100 per month.

3. Minimum retirement benefit increased to \$10 times years of service up to 25, plus \$15 times years of service greater than 25. (Previously was \$6 up to 25 years of service plus \$7.50 over 25 years of service.)
4. Disability benefit changed to 1.55% of FAC times years of service using a minimum of 20 years of service.

### **1995 Legislative Session:**

There were no material changes made during the 1995 legislative session.

### **1997 Legislative Session:**

1. Benefit multiplier increased from 1.55% to 1.75% for all future retirees.
2. Member assessment rate and employer contribution rate increased from 6.75% to 7.75%.
3. A \$30.00/month benefit improvement was granted to all retirees and beneficiaries.

### **Summary of Plan Changes (continued)**

#### **1999 Legislative Session:**

1. Active members will now be fully vested after three years (rather than five years) of service.
2. Early retirement benefits will be reduced 6% per year from the earlier of (i) age 65, or (ii) the date as of which age plus service equals 85 (rather than from age 65 in all cases).
3. An ad hoc COLA was provided for all retirees and beneficiaries. This increase is equal to an additional \$2 per month for each year of service plus \$1 per month for each year since the member's retirement.
4. The formula multiplier was increased from 1.75% to 1.88% effective July 1, 1999.

#### **2001 Legislative Session:**

1. An ad hoc COLA was provided for all retirees and beneficiaries. The ad hoc COLA increase is equal to an additional \$2.00 per month for each year of service plus \$1.00 per month for each year since the member's retirement. Retirees and beneficiaries will also receive two additional increases equal to 0.75% times the monthly benefit, payable July 1, 2001 and July 1, 2002. The two 0.75% increases are conditional. If the actuarial margin is a shortfall, i.e., is negative, by 60 basis points or more, or if the margin has been negative by 30 or more basis points for two years, the Board could elect to suspend the increase.
2. The formula multiplier was increased from 1.88% to 2.00% effective July 1, 2001.

#### **2003 Legislative Session:**

1. Partial lump-sum option adopted, equal to twelve times the monthly life annuity benefit. Not available if level-income option is elected. Not available for reduced retirement or disability retirement.
2. Five-year certain and life option replaced with 20-year certain and life. This does not impact retirees who retired under the five-year certain and life option.
3. Employer service purchase authorized.
4. Active members of the Department of Public Instruction are permitted to make a one-time irrevocable election to transfer to the North Dakota Public Employees Retirement System in FY2004. Both assets and liabilities for all TFFR service will be transferred for electing employees. Transferred assets will be based on the actuarial present value of the member's accrued TFFR benefit, or the member's contribution account balance if larger.

#### **2005 Legislative Session:**

There were no material changes made during the 2005 legislative session.